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1009	Title 2010 MOURNING DOVE POPULATION STATUS	02/05/11

ABSTRACT: In 2010, the Indiana Division of Fish and Wildlife (IDFW) cooperated with the U.S. Fish and Wildlife Service to conduct the National Mourning Dove Call-Count Survey, the National Mourning Dove Banding Program, and the Harvest Information Program (HIP). The average number of doves heard along each route in 2010 (25.4 doves) declined 1.6% from 2009 (25.9 doves), but this difference was not statistically significant. Indiana's mourning dove breeding population has remained nearly unchanged over the last 10-year period, and has only significantly declined (-1.3%) over the long-term study (1966-2010). In 2010, Indiana achieved its regional banding goals with 1324 banded birds, but fell short of capturing enough hatch year birds in the Central Hardwood region to achieve the age ratio goals. An estimated 13,200 hunters harvested approximately 243,200 doves in 2009.

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The mourning dove is one of the most widely distributed and abundant birds in North American and has a well-deserved reputation as a superbly challenging game bird. Mourning doves remain the most abundant upland game bird in Indiana. Because the species is migratory in nature, the U. S. Fish and Wildlife Service (USFWS) is responsible for its management. State fish and wildlife agencies, in cooperation with the USFWS, conduct an annual survey to monitor changes in mourning dove abundance, an operational national dove banding program to provide data on estimates of population survival and recruitment rates as well as harvest rates, and the Harvest Information Program (HIP). The Indiana Division of Fish and Wildlife has cooperated with USFWS on the Mourning Dove Call-Count Survey since 1966, the Dove Banding Program since 2004, and the HIP program since 1999.

METHODS

Mourning Dove Management Regions

Since 1960, Mourning dove populations have been monitored and managed in three survey

units: the Eastern, Central, and Western Management Units. Indiana is 1 of 27 states in the Eastern Management Unit. Also, Indiana is 1 of 19 states within the Eastern Management Unit that permits dove hunting.

Call-Count Survey

The Office of Migratory Bird Management of the USFWS established 15 Indiana dove call-count survey routes in 1966. Each route was randomly located and consists of 20 listening points spaced at one mile intervals on secondary roads. Surveys begin ½ hour before sunrise, and are not conducted during rain, or when winds exceeded 12 mph. The number of individual doves heard during a 3-min listening period at each point was recorded. The number of doves seen, whether during the listening period or traveling between points, was also recorded. In 2010, Indiana Division of Fish and Wildlife biologists surveyed these 15 routes between 20 May and 28 May. Office of Migratory Bird Management personnel analyzed the data using a log-linear hierarchical model fit using Bayesian methods, and 2-year, 10-year, and 44-year trends were compared.



Statistical significance was defined as $P < 0.05$, except for the 2-year comparison where $P < 0.10$ was used due to the low power of the test.

National Mourning Dove Banding Program

The USFWS has established optimum banding samples by Bird Conservation Regions (BCR) within each state. Calculation of optimum banding sample sizes for each state requires values for state-specific survival and recovery rates, and absolute recruitment. Indiana has three BCRs: Eastern Tallgrass Prairie (BCR 22), Prairie Hardwood Transition (BCR 23), and Central Hardwood (BCR 24). The optimum banding sample proportions of the BCRs in Indiana are:

BCR 22 – 0.48

BCR 23 – 0.11

BCR 24 – 0.41

Harvest Information Program (HIP)

This survey was developed by the USFWS and state agencies to gather reliable estimates of hunter participation and dove harvest. From hunter information provided by the Indiana Division of Fish and Wildlife, the USFWS randomly selects a sample of hunters and asks them to provide a daily log of hunting activities and harvest, which is used to calculate days afield and harvest for Indiana, and the region.

RESULTS

Call-Count Survey

Sanders and Parker (2010) calculated that 25.4 doves were heard per survey route during the 2010 survey in Indiana, fifth best in the Eastern Management Unit behind NC (40.9), SC (28.0), KY (27.1), and IL (26.7), while 25.9 doves were heard per survey route during 2009. Sanders and Parker (2010) found the number of calling doves heard per survey route in 2010 was 1.6% lower than the number heard in 2009, but was not a significant change. Over the last 10-year period, the number of mourning doves heard along survey routes in Indiana has fluctuated, but remained virtually unchanged (-0.8%). Over the 45-year study, the number of mourning doves heard along survey routes in Indiana has significantly declined 1.3% per year while the entire Eastern Management Unit has declined an insignificant 0.3% (Figure 1; Sanders and Parker 2010).

National Mourning Dove Banding Program

Between 1 July and 15 August, DNR biologists banded 1324 mourning doves. Regional banding proportions were achieved, but the age ratio was not achieved (Table 1), with a shortfall in hatch year bird captures in the Central Hardwood region (BCR 24).

Harvest Information Program (HIP)

Based on Preliminary results, an estimated 13,200 mourning dove hunters (Figure 2) spent 40,300 days afield and harvested 243,200 mourning doves (Figure 2) in Indiana during the 2009-2010 hunting season. Estimates of harvest and hunter numbers during the 2009-2010 season were lower than those during the 2008-2009 season (Figure 2; Raftovich et al 2010).

DISCUSSION

Compared to other states in the eastern U.S., Hoosier dove hunters continue to enjoy a relative abundance of birds. The number of birds heard per route in 2009 was second only to North Carolina in the Eastern Management Unit. Even with seasonal fluctuations, USFWS researchers (Sanders and Parker 2010) found the number of doves heard along Indiana call-count routes has remained virtually unchanged over the last 10 years (2000-2010). These results signify the fact that our population is healthy and that our current regulations and management approaches are appropriate. The Eastern Management Unit, as a whole, has remained even more stable over the last 10 years than Indiana, but Indiana holds a higher index of doves per route. However, over a 45-year period, the call count survey has shown a decline in the population of mourning doves in both Indiana and the EMU, with Indiana having a significant decline over this time period (Figure 1). This significant decline can most likely be attributed to severe weather events, loss of habitat, and changes in grain production across Indiana.

There is no other game bird that can challenge the most experienced wing-shooter and provide the novice with numerous opportunities. Dove hunting provides a great opportunity to introduce youth or new hunters to the sport. However, there must be places

available for these hunters to get this experience. Many dove hunters enjoy the managed public dove fields found at some reservoirs and fish and wildlife areas. However, the future of hunting and our upland game bird populations mostly depends upon the commitment of private landowners to provide access to hunters and to provide small game species with adequate habitat. Wildlife incentive programs in the most recent farm bill provide monetary support to landowners willing to implement wildlife-friendly practices on their land. If you would like more information about these programs or would like to enroll your land, please visit your local USDA service center. In addition to federal programs, the Indiana Division of Fish and Wildlife administers several cost-share programs that provide monetary assistance to landowners willing to improve game bird habitat on their property. For additional information about these IDFW programs, contact your local district biologist or visit:

<http://www.in.gov/dnr/fishwild>

LITERATURE CITED

- Sanders, T.A., and K. Parker. 2010. Mourning dove population status, 2010. U.S. Department of Interior, Fish and Wildlife Service, Division of Migratory Bird Management, Washington, D.C.
- Raftovich, R.V., K.A. Wilkins, K.D. Richkus, S.S. Williams, and H.L. Spriggs. 2010. Migratory bird hunting activity and harvest during the 2008 and 2009 hunting seasons. U.S. Fish and Wildlife Service, Laurel, MD, USA.

Table 1. Annual goals and 2010 results from the National Mourning Dove Banding Program within 3 Bird Conservation Regions (BCR) in Indiana. [note: AHY = After hatch year bird; HY = Hatch year bird]

BCR	Annual Goals		2010	
	AHY	HY	AHY	HY
22	165	225	380	258
23	39	53	91	54
24	138	188	419	120
Statewide	342	466	890	432

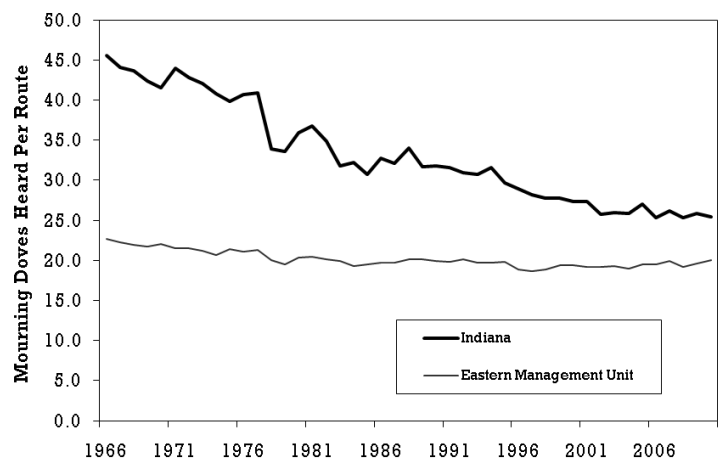


Figure 1. Breeding Population Indices (number heard per route) for mourning dove from the annual Call-Count Survey, 1966-2010 (based on log-linear hierarchical model fit using Bayesian methods; Sanders and Parker 2010). Along with indices for Indiana, indices are also shown for the entire Eastern Management Unit (EMU) which includes the states of AL, CT, DE, FL, GA, IL, IN, KY, LA, ME, MA, MI, MS, NH, NJ, NY, NC, OH, PA, RI, SC, TN, VT, VA, WV, and WI.

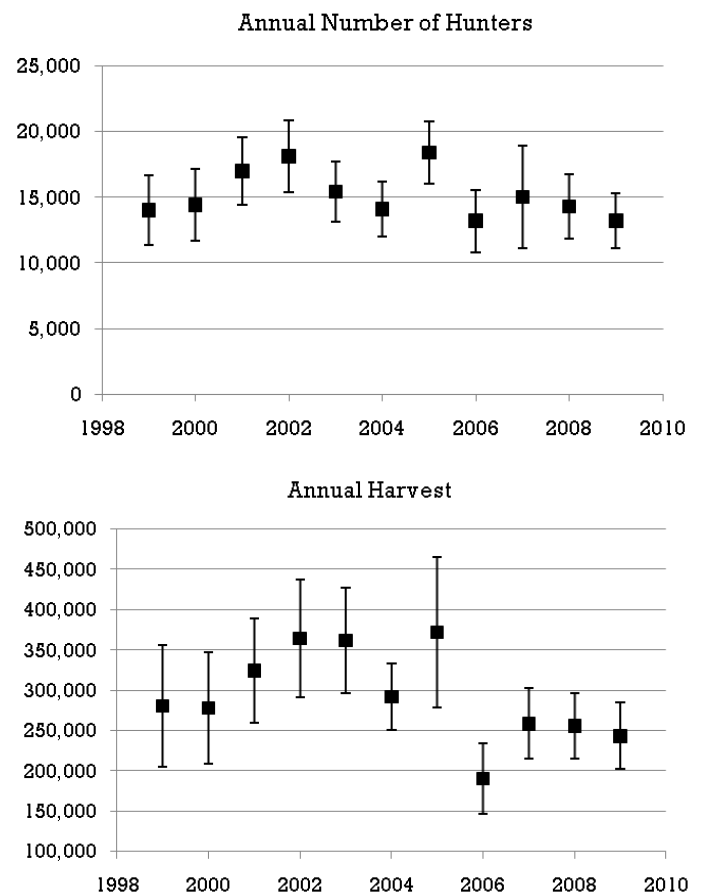


Figure 2. Estimated number of hunters and harvested mourning doves between 1999 and 2009 based on data from the Harvest Information Program (HIP). [note: data after 2002 is preliminary and has not been finalized; all estimates are rounded to the nearest hundred]